

# Rules for project development

## Project assignment

A project can be assigned to one or two students. To request a project, select one among those still available listed on the course website and send an Email to Giorgio Buttazzo specifying the following information:

- Full name(s);
- Student ID number(s);
- Course you belong to (e.g., AO-SSSA, PhD-EDT, PhD-DS, etc.);
- Email address(es);
- A list of 3 or 4 Project titles (listed by decreasing priority, among those available).

If there are no conflicts with other similar requests, you will be assigned the highest priority project available in the provided list. After receiving a confirmation Email you can start working on it.

## Project tools

The project can be developed in Python or in C, using any machine learning framework (preferably PyTorch), or implementing everything from scratch (if shallow networks are employed for the application).

## Project discussion

Preliminary working programs must be discussed at least three weeks before the exam. Programs have to be executed on your own laptop. After the discussion, possible changes or additions may be requested to complete the project. Please send an Email to [g.buttazzo@santannapisa.it](mailto:g.buttazzo@santannapisa.it) to set an appointment for the first discussion. The final discussion has to be agreed by Email before the exam.

## Project report

A report must be produced (8-10 pages) to explain the project details. In particular, the title page must contain the name of the course under which the project has been done, the project title, an optional picture related to the project, the delivery date, and the author(s) name(s) with contact information (student ID number and Email).

The report must include a general description of the considered application and other details used for its implementation, as the type of neural network(s), the programming language, the machine learning framework, the dataset used for training, validation, and testing, the type of dataset augmentation (if any), the values of all hyperparameters, the metrics defined to evaluate the performance, and the experiments carried out in the project. Figures and screenshots are welcome. The project code must not be included in the report, but in a separate folder.

## Project delivery

The final project must be delivered via Email before the exam, after the final discussion. It must be sent as a single compressed (.zip o .rar) file containing the report in pdf and a folder with the source code. Please name the compressed file and the internal folder with your last name followed with a short project name (for example: Rossi\_faces.zip or Rossi-Bianchi\_faces.rar).